

The documentation and process conversion measures necessary to comply with this amendment shall be completed by 4 January 2001.

INCH-POUND

MIL-PRF-19500/469B
AMENDMENT 1
4 October 2000

PERFORMANCE SPECIFICATION SHEET

SEMICONDUCTOR DEVICE, SILICON, HIGH-POWER, SINGLE PHASE,
FULL WAVE BRIDGE RECTIFIER TYPES M19500/469-01, -02, -03, -04, -05
JAN, JANTX, AND JANTXV

This amendment forms a part of MIL-PRF-19500/469B, dated 12 April 1998 and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

1.3, note 2/, add, " $t_{rr} = 2.5 \mu s$ at $I_f = 0.5 A$, $I_r = 1.0 A$, $I_{rec} = 0.25 A$ ".

PAGE 4

FIGURE 1, dimension information, letter C₃, minimum value, delete ".173" and substitute ".175".

FIGURE 1, dimension information, delete letter L₃ and all applicable information.

PAGE 5

4.3, delete paragraph title and substitute "Screening (JANTX and JANTXV levels only)".

PAGE 6

4.3.1, measurement information, thermal impedance, delete "(see 4.5.7)" and substitute "(see 4.5.6)".

4.3.1, step 13, measurement information, post burn-in endpoints, add "(see 4.5.5)" at end of measurement.

4.3.2, measurement information, delete "JANTX level" and substitute "JANTX and JANTXV level".

4.3.2, measurement information, delete "MIL-STD-750, method 1061, condition F" and substitute "MIL-STD-750,

4.3.2, screen information, dielectric withstanding voltage, delete "See 4.5.1" and substitute "See 4.5.2".

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4.4.2.1, delete and substitute,

“4.4.2.1, Group B inspection, appendix E, table VIb of MIL-PRF-19500.

<u>Subgroup</u>	<u>Method</u>	<u>Conditions</u>
B2	1051	Condition F, 25 cycles.
B2		Electrical measurements, see group A, subgroup 2.
B2	1071	Not applicable.
B3	1027	$I_0 = 0$ A dc; $T_A = +150^\circ\text{C}$; $V_{RWM} = \text{rated } V_{RWM}$ (see 1.3), $f = 60$ Hz, $n = 10$, $c = 0$.
B3		Electrical measurements, see group A, subgroup 2.
B5		Operational thermal cycling, (see 4.5.7).
B5		Electrical measurements, see group A, subgroup 2.
B5	3105	Junction temperature test (see 4.5.3).
B6		Not applicable.”

4.4.3.1, delete and substitute,

“4.4.3.1. Group C inspection, appendix E, table VII of MIL-PRF-19500.

<u>Subgroup</u>	<u>Method</u>	<u>Conditions</u>
C2	1056	Not applicable.
C2	2036	Test condition A, 6 pounds, $t = 30$ seconds.
C2	2036	Test condition D1, $t = 10$ seconds, 16 inch-pounds.
C2	1071	Not applicable.
C5	1001	Pressure = 8 mm Hg (469-01 through 03); 33 mm Hg (469-04, 05), $I_R = 2.0$ μA dc maximum, $V_R = \text{rated } V_{RWM}$ (see 1.3), (applied between all terminals to the case); sampling plan = 15, $c = 0$.
C6	1026	$I_0 = 0$ A dc; $T_A = 150^\circ\text{C}$; $V_{RWM} = \text{rated } V_{RWM}$ (see 1.3), $f = 60$ Hz.
C6		Electrical measurements, see group A, subgroup 2.
C7	4066	$V_{RWM} = 0$ V, bridge $I_0 = 10$ A dc (entire bridge biased); $T_C = 55^\circ\text{C} + 10^\circ\text{C}, - 0^\circ\text{C}$; IFSM = 100 A (pk) (each device per bridge leg); $t_p = 8.3$ ms; 10 surges per leg at maximum 1 minute intervals; $n = 22$ $c = 0$. Alternate condition: Each leg may be biased separately to $I_0 = 5$ A dc per leg. All

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4.5.4, end of sentence, add "4031".

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TABLE 1, subgroup 2, reverse current bridge leg, max limit column, delete "20" and substitute "2".

TABLE 1, subgroup 2, breakdown voltage, min limit column, delete and substitute,

"240
"460
"660
"880
"1100"

TABLE 1, subgroup 2, thermal impedance, conditions column, delete "See 4.5.7" and substitute "See 4.5.6".

TABLE 1, subgroup 3, high temperature operation, delete " $T_C = 100^\circ\text{C}$ " and substitute " $T_A = 65^\circ\text{C}$ ".

TABLE 1, subgroup 3, breakdown voltage, symbol column, delete " $V_{(BR)1}$ " and substitute " $V_{(BR)2}$ ".

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TABLE 1, subgroup 4, dielectric withstanding voltage, conditions column, delete "See 4.5.3 " and substitute "See 4.5.2".

TABLE 1, subgroup 7, scope display evaluation, conditions column, delete "See 4.5.6" and substitute "See 4.5.5".

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FIGURE 2, title, delete and substitute "Reverse recovery characteristic waveform.".

PAGE 13

FIGURE 3b, delete "5.6 ms" and substitute "8.3 ms".

Custodians:
Army - CR
Navy - EC
Air Force - 11
NASA - NA
DLA - CC

Preparing activity:
DLA - CC
(Project 5961-2324)

Review activities:
Army - AR
Navy - AS, CG, MC
Air Force - 19, 99